

REMARKS/ARGUMENTS

Claims 70-94 are active in this case. The previous set of claims was cancelled in favor of the presented claims and the new set of claims correspond substantively to those previous claims, where Claim 70, which corresponds to previous Claim 38, has been presented as the first claim and the remaining dependent claims are presented following claim 70. In addition, in this new set of claims, the human hematopoietic cell composition being cultured has been amended to be defined as “mature” and “terminally differentiated.”

No new matter is added in light of the support for these amendments found in the specification on page 7, lines 3-4 and 6-7.

A recurring basis of the various rejections raised in the Office action is the definition of the cell composition being cultured in the claimed method. However, as amended herein, there should not be any confusion as to what types of cells are being cultured.

The objection to claim 41 and 52 (under 37 CFR 1.75) is obviated by the cancellation of the claims. Claims 70-94 are free of the criticisms raised in the Office Action.

The rejection of Claims 6-7, 10-12, 38-41, 49-58 and 60-66 under 35 U.S.C. § 112, second paragraph is obviated by the cancellation of these claims. Claims 70-94 are free of the criticisms raised in the Office Action under this heading. In particular, the Office points to various definitions provided in the specification and suggests that there is some confusion because mature cells can be terminally differentiated or T cells, which according to the Action can exist in various states of differentiation (see pages 4-5 of the Office Action). As noted above, the claims have been amended to delineate that the mature cells are terminally differentiated. Accordingly, there should be no confusion as to the types of cells being cultured and as such Applicants request that this rejection be withdrawn.

For these same reasons, it is requested that the rejection under 35 U.S.C. § 112, first paragraph be withdrawn as the basis for the rejection is substantially the same (i.e., the meaning of “mature”).

The rejections of Claims 10 and 38 under 35 U.S.C. § 102(b) in view of the Emerson et al patents, i.e., US ‘994, US ‘822, US ‘386, US ‘043, US ‘147 and US ‘198, are respectfully traversed.

These Emerson et al patents, as duly noted by the Office, are to culturing stem and/or progenitor cells found in the human hematopoietic system. On this basis, therefore, the culture medium used for this culturing are optimally designed for culturing such stem cells. This is evident from the discussion of the culturing of these immature cells in the presence of various growth factors and cytokines to induce the immature cells to differentiate into various cells, such as erythroid, granulocyte and macrophages (citing to the section of the ‘043 patent in col. 26, line 60 to col. 27, line 18; see also the corresponding sections of US ‘043 and US ‘198). Notably, the ‘822 patent does not discuss the production of mature cells as in the ‘043 patent (i.e., culturing stem cells in the presence of growth factors and interleukins to induce differentiation). In other words, the cultures produce these cells from the cultured stem/progenitor cells because the culture conditions are optimized for the production.

However, while there may have been mature cells being produced and, perhaps, even some cells surviving the culture, the mature cells under the conditions described in the Emerson examples are depleted and not growing, see col. 5, lines 34-40 of the ‘043 patent, which discusses the removal of mature cells using immunological techniques (see also, the top of col. 8 of the ‘822 patent). Accordingly, the conditions used for the culturing in the Emerson et al patents are not the types of culture conditions (e.g., media) which enables

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mature, terminally differentiated cells to expand and attain enhanced biological function as claimed.

In view of these distinctions, Applicants request that the rejections under 35 USC 102(b) be withdrawn.

To the rejection under the doctrine of obviousness-type double patenting in view of the child of the present application (U.S. patent no. 6,835,566), Applicants attach to this paper a terminal disclaimer thereby obviating this rejection.

A Notice of Allowance indicating that all pending claims have been allowed is requested.

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